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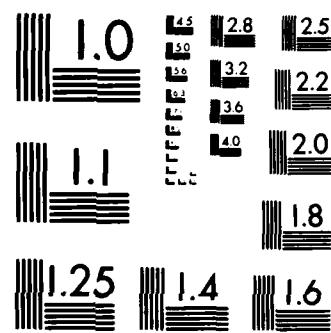
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Kevin N. Lewis

March 1985

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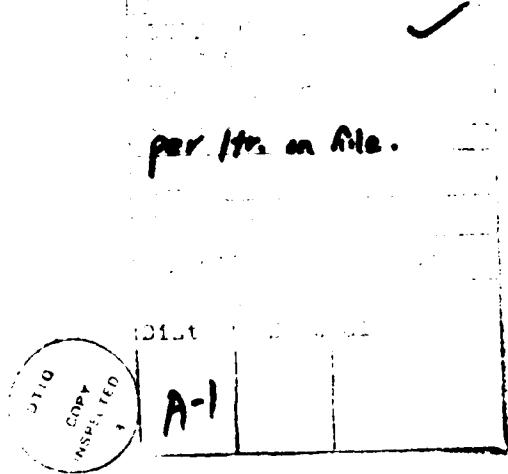
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MANAGING THE CURRENT TRANSITION IN STRATEGIC NUCLEAR AFFAIRS

Kevin N. Lewis

The Rand Corporation, Washington DC

March 1985

INTRODUCTION

In considering the whys and wherefores of strategic analysis, historians enjoy a great advantage over those who would seek to predict the nature of future strategic environments and say how some present issues and choices might be managed in order to improve our relative position in subsequent years. The historical record can be carefully analyzed to reveal the reasons behind previous choices about force structure, employment strategy, declaratory policy, and so on. Even when a particular choice may not have been "optimum," historians can usually develop plausible explanations for the failure to perform better.

By contrast, those who would attempt to evaluate current issues--or, for that matter, indulge in crystal ball gazing--confront at least two serious hurdles. First, even with all available data and reasonable assessment techniques, projection of the forms the strategic future may take is risky business. The Chinese have a pertinent saying: "that prediction is always hard--especially when it comes to the future." The wisdom of that statement is immediately apparent in any survey of previous nuclear prognostications. For one albeit extreme example, in 1921, following some early breakthroughs in nuclear physics, one prescient observer noted that:¹

The views expressed here are the author's, and do not necessarily reflect those of Rand, or any of its sponsors. This talk was presented at the 1985 Aiken Lecture Series, sponsored by the University of Vermont, on 28 March 1985.

¹This quote from a May 1921 issue of *The World's Work* is cited in *The New Yorker*, March 25, 1985, pg. 130.

When we have discovered the secret of the atom and can control its force, it is likely all nations will be ready and willing to lay down their arms and abolish their armies and navies. Statesmen will be glad to sit around a table and compromise their differences without any talk of force, for a power will be available in the world so mighty in its potentialities that no person would dare consider its use except for some constructive purpose.

Frequently, strategic forecasting has made even weather prediction seem a precise science by comparison.

The second handicap impeding reliable assessment and prediction results from the confusion, chaos, and general turbulence that surround such emotional issues as nuclear strategy and planning. No strategic question is ever so clear that one cannot find a vast array of divergent (occasionally extremely so) opinions on the matter. How, for instance, can at least two parties agreeing on the basic principle of "nuclear winter," and in possession of roughly the same facts, formulate diametrically opposed policy recommendations? Even if nuclear forces were free, even if there were no alliance issues to manage, and even if technological uncertainties vanished, there would be no diminution in the volume or acrimony of the ongoing strategic debate. However, over time, the emotional quality of the debate tends to fade. Generally speaking, what seems confused and contentious today may be far more easily interpreted by cooler observers enjoying the benefit of "20-20 hindsight."

Therefore, I will steal a page from the historians and begin with these two assumptions. I will first assume that the same kinds of factors and processes that have shaped the history of strategic developments to date will continue to influence events for at least the near future. In other words, the present strategic planning context has a memory, and a good one at that. Second, I will assume that confusion, chaos, and eccentricity are to history what pain is to the body: sensations often hard to remember much after the fact. Thus, as we survey the current strategic debate--as it concerns basic policy, weapon system acquisition issues, budget options, and any number of related matters--it is worthwhile to view the future before us as an extension of the past, and I will organize these remarks accordingly.

One interesting question before us at this time is to what degree we should attempt to depart from the historical patterns of the past two decades. I will argue that these patterns reflect "good reasons": The forces, plans, and strategies before us have not grown like Topsy. On the other hand, there is much discontent with the direction, pace, and character of many of these evolutionary patterns. Accordingly, many advocates would have us reject our strategic legacy in favor of some substantially new approach to nuclear deterrence.

In view of this controversy, I will try to argue the following points. First, the strategic planning environment as a whole is now in the early stages of a transition of major proportions. Now this is by no means a new or unique phenomenon: The most cursory review of the strategic past reveals a kind of historical periodicity. The changes occurring as events unfold certainly are not discrete, spontaneous, and necessarily very distinguishable at the time. At every stage of the game, moreover, there are significant mismatches and disconnections among our strategic posture, war plans, strategies, defense arrangements with allies, and the like.

Nonetheless, it is possible to look back and identify certain trends and themes that make it possible to treat different strategic epochs as "specific" entities. One interesting thing about these epochs is that their pace of change seems, like the Earth's rotation, to be steadily slowing down over time. It took about five years to move from our vague post-World War II concepts of atomic war to the so-called Massive Retaliation strategy. The Massive Retaliation notion was ten years later superseded by a strategy emphasizing Flexible Response. And, two decades after that, we currently seem to reside at a new crossroad of sorts. If this pattern persists, it will take another doubling before we come upon the *next* epoch in about 2020 A.D.

This deceleration in the pace of strategic change seems to fly distinctly in the face of recent statements and allegations. Indeed, a quick glance at the headlines suggests that we are approaching a kind of "white water" phase after a more leisurely trip down a quieter strategic route. Now it may be possible to embark upon some radical transformation, but I will suggest that attempts to change things

substantially in the near term will probably be met with failure. In my view, such attempts could as well lead to significant jeopardy.

That being the case, I will consider, as a second point, the wisdom of trying to depart substantially from the fairly modest pace of change in the strategic environment of recent years. In my view, it is probably best to manage the coming strategic transition by gradual, not radical, steps--unless it can be shown that some of the new concepts being considered probably do take into account certain important realities influencing strategic nuclear planning.

THE STRATEGIC PLANNING CONTEXT IN TRANSFORMATION

Academic investigators, official analysts, the general public, and those who may fall into various hybrid categories frequently find themselves in wide-ranging debates on any number of issues relating to nuclear deterrence and, should it come to that, the use of nuclear weapons to defend national security interests. Based not only on inspection of popular media, then, but on the declarations of the official or professional community as well, it would be hard to avoid the conclusion that the strategic planning environment founders in perpetual turmoil and upheaval. New technological possibilities seem to present themselves on daily. Strategies for the conduct of nuclear operations seem to be revised annually. We seem to land regularly on our allies' doorsteps with new concepts for theater defense that sometimes call for the enhancement of selected nuclear capabilities and sometimes for the abandonment of others. Recently, the very political and philosophical bases underlying nuclear deterrence have been challenged from several directions, whether the case made has been for "Star Wars" (the Strategic Defense Initiative, or SDI), a No-First Use strategy, "deep cuts" in offensive arms, an offensive posture capable of fighting and prevailing in protracted nuclear war, or what have you. And all throughout, the "mad juggernaut of the arms race" allegedly careens unchecked, as new and more terrifying weapons are apparently added to national arsenals at nothing less than a feverish pace.

The Strategic Environment Has, in Fact, Been Quite Stable Lately

Such atmospherics belie, in my view, the actual state of play in the broad field of strategic affairs. Reports of abrupt shifts in strategy, plans, etc. would come as news to those charged with the actual design and implementation of posture, employment options, and related initiatives. Viewed in terms other than declaratory ones, in fact, the U.S. strategic planning and policy context as a whole has for going on two decades been quite stable (although there are certainly exhilarating episodes from time to time). Among other things:

- There has been a steady convergence in our thinking about operational employment strategy. Concepts of strategic flexibility, first articulated officially in the very early 1960s, have been steadily if not swiftly fleshed out over time. The present employment concept, the "countervailing strategy" (actually a Carter administration expression, although Reagan administration recapitulations do not, apparently, diverge substantially), is intended to be sensitive to known Soviet doctrinal inclinations, the practical difficulties attendant upon any strategy incorporating employment flexibility, the necessary corollaries of a flexible operational strategy (e.g., survivable command and control and adequate connectivity), and the like. Most people now agree on two key facts: that employment flexibility is an essential basis for strategy, yet there are significant limitations on the degree to which the principles called for by a flexible employment strategy can be translated into operational reality.
- Substantial consensus has emerged on both sides of the Atlantic that U.S. nuclear forces can play only a rather limited role in the deterrence of potential adversary aggression that is less than all-out. In other words, the domain of possible challenges to which threatened nuclear use might be relevant has steadily contracted over time. We are moving away from the all-purpose deterrent of the 1950s to one that is increasingly specialized. At the same time, there is widespread agreement

on the need to backstop that vanishing margin of nuclear superiority with a more effective and credible conventional deterrent capability.

- Strategic budgets have stabilized as a share of the DoD budget as a whole. Between fiscal years 1968 and 1983, spending on strategic nuclear forces (i.e. Program I) averaged a highly consistent 8.6 per cent of DoD TOA. Absolute strategic spending has increased somewhat, however, inasmuch as defense budgets have grown steadily in real terms over the past decade. But even though we are now undertaking a comprehensive modernization program, strategic spending still falls short of the levels experienced historically. For instance, over the 16 year period FY68-FY83, cumulative Program I TOA amounted to \$282 billion (in \$FY85), compared with a total of nearly twice as much (\$547B) spent during the 16 fiscal years before that.
- The strategic force structure has, in many ways, stabilized as well. Although it seems inconsistent with much recent rhetoric, the current "new" Triad of offensive delivery vehicles--MX, TRIDENT, and B-1--were originally intended to replace their predecessors on a one-for-one basis.² This replacement process--simultaneously involving all three legs of the Triad--is now necessarily so vigorous, costly, and controversial, of course, because more orderly, one-at-a-time modernization initiatives were deferred frequently in the 1970s. Recent developments have combined so that the "new generation Triad" will not be fully procured--but new systems (like Midgetman and ATB) should compensate for some of the difference. True, new weapons programmed are more capable than the ones they replace; but then again, the environment within which they would operate is a more demanding one too.

²That is, 200 MX at 10 MIRVs each (for a total of 2000 RVs) "replace" 2100 RVs on MINUTEMAN II and III; 240 B-1s were to replace a like number of B-52G and H bombers; and 25 TRIDENT SSBNs, each with 24 SLBM tubes and an availability rate of on the order of 70 per cent put on station about as many missile tubes as did the full 41 boat POLARIS/POSEIDON force.

These instances are cited to illustrate the fact that the evolution of forces, plans, budgets, and strategic concepts is not really as turbulent as much popular rhetoric might lead one to believe. Certainly U.S. strategic initiatives have sought to keep pace with, at the very least, significant changes in the external operational environment. For instance, U.S. force attributes reflect changes in the appropriate Soviet target arrays. U.S. nuclear efforts have, moreover, been influenced by domestic and foreign political phenomena: The inability of Secretary Schlesinger to pursue a limited civil defense program (one very consistent with his other flexible employment efforts) is a case in point. But in relative terms, stability obtains.

Reasons For Such Stability

It is useful to ask why such stability has, in fact, existed. Consider the following incomplete list of explanations.

- *Force structure changes take increasingly long to implement.* Even if we did resolve to proceed at full speed with some new weapon concept, the fielding of an effective military capability may be realized only after a decade or more of effort. If anything, this phenomenon becomes more and more striking over time. For instance, when the decision to deploy POLARIS was made back in the 1950s, it took roughly five years to move an entirely new kind of complex program (the submarine, as well as associated missile systems) from the drawing board into the field. By contrast, SAC documented an official requirement for a new ICBM (MX)--a weapon concept that they understood quite well--in 1972! And once on line, new weapons--even ones that meet their design specifications--can take quite some time to "shake down" so that they operate smoothly on a day to day basis in the hands of regular forces (as opposed to factory teams).
- *War plans take years to modify substantially.* As we shall see, strategic employment plans are very intricate entities. Recent estimates have suggested that if some new slant to targeting

plans were to be introduced today, it would take on the order of two years to find its way into the hands of operational units.

- *Other security problems occupy our attention more and more.* In the 1950s and early 1960s, nuclear forces may have occupied center stage. But in the wake of the Vietnam War, other problems--such as responding to improved Soviet conventional capabilities in Europe (put on line while our attention was diverted to Southeast Asia), and dealing with the collapse of what once passed for our security arrangements for Southwest Asia--have imposed a redoubled call on our energies and resources. We face the so-called modernization inflation problem in our force structure planning. We must endure a growing operations and manpower burden, and our allies' contribution to defense on a worldwide level has declined compared with previous decades. In short, there is a tremendous competition for resources among the enterprises represented in the Defense Department budget, and it is hard to imagine that we would ever see the rates of real defense budget growth that would make it possible to painlessly underwrite all relevant defense programs. It is widely believed (and in my view, correctly so), that the probability of nuclear war occurring is more a function of the failure of Western conventional deterrence in key regional theaters than a function of some minor perturbation of the superpower nuclear balance. For this reason, if no other, nuclear forces have declined in relative overall importance.
- *More people are involved, and are better able to participate, in the strategic debate.* This is self-evident and self-explanatory. With increasing public understanding of, and participation in, the strategic debate as a whole, the development of general political consensus becomes much more important. Issues that were considered only in the most aggregated terms a couple of decades ago are now dissected in detail in many forums. For example, Congress would never, twenty-five years ago, have intervened much in the

determination of technical issues pertinent to the then new ICBM program. By contrast, today Congress is deeply involved, to the point where there are statutory limits on no less than the weight of a future "Midgetman" small ICBM! Some think that this process has gone too far, while others welcome it: for our purposes, the point simply is that there are more and, often, better informed players in the strategic debate than ever before.

For these and other reasons, the nuclear planning problem in the 1970s may not have been the main attraction to many defense planners. As the total defense planning problem became larger and more complex, it was inevitable that strategic issues should wane in relative importance. Now, none of this should be taken to suggest that the ongoing development of strategy, weapons, and so on is simply running out of steam and slowing to a glacial pace, nor that we have become casual and sloppy about nuclear issues now that our posture and strategy are well into middle age. Rather, substantial change is possible and, in my view, beginning to transpire--but, unless we change the way we approach business, not at any breakneck speed. Barring unusual developments, we should witness no dramatic changes in force levels, employment concepts, posture planning principles (such as maintaining a "Triad"), alliance doctrinal principles, arms control concepts (for instance, the need for some perceptible state of parity), etc.

New Perturbations to the Existing Condition of Stability

However, the fact that we have reached a state of relative equilibrium in our ongoing strategic evolution does not rule out potentially major perturbations. In fact, we are now confronting many new developments that will require adjustment of recent patterns of strategic planning. The question of interest, as we shall see, is how much of a basic compensation in our strategy we shall have to make to account for them.

Many of these changes have been widely discussed recently, and so I will now only briefly mention them. All of them pose some kind of significant challenge to past ways of looking at the strategic problem.

- *Technological Changes.* The strategic operational environment has been much transformed lately. Weapons and sensors have become much more effective, and so even very hard fixed targets have become steadily more vulnerable over time. In response to this development, we will see more "imprecisely located targets" (for just one instance, the Soviets are now in the process of beginning to deploy mobile ICBMs). But how to find and target these assets is a new operational challenge of major proportions. Other technological possibilities of note include the possible attack of strategic targets with nonnuclear munitions, new strategic defensive and space combat technologies, and steadily improving command, control, and communications capabilities. One additional change of a "technical" sort involves the "nuclear winter" hypothesis. It is unclear just what the total policy ramifications of nuclear winter would be if the hypothesis is "proved."
- *Political Shifts.* One doesn't need reminding that nuclear force planning has become so politicized. The new political environment--as it regards the mobilization of domestic consensus, the generation of alliance support, and our dealings with the Soviets--will play an increasingly pivotal role in our strategic planning exercise as a whole.
- *Changes in the Balance.* The relative military advantages of the U.S. and Soviet Union, and the significance of these, are the subject of hot dispute. The steady improvement in Soviet capabilities over the past twenty years relative to our own, the existence of major asymmetries within the U.S. and Soviet postures, and the dissimilar security requirements of the two superpower blocs challenge some of the assumptions that have traditionally underpinned most strategic calculations. For just one example, differences apparent in Soviet and U.S. force design philosophies now seem to rule out the traditional one-for-one "bean count" approach to arms control, but no new method for counting has yet taken its place.

- *Thinking about Policy and Strategy Issues.* The changing conventional balance has influenced our strategic calculus, as has the increasingly vigorous competition between conventional and strategic forces for defense resources. Moreover, there has been a steadily improving understanding of Soviet nuclear thinking, which must be--and increasingly is--taken into account in U.S. planning.

Such developments as these have been a catalyst behind a number of searching explorations of the theoretical and practical foundations on which U.S. nuclear planning enterprises of all sorts are based. How does nuclear power relate to other national means when it comes to the deterrence of Soviet attacks on crucial places like Europe? What is the best way to deter the Soviet use of nuclear weapons in the first place? How can war goals be pursued with nuclear weapons should deterrence fail? How can war be ended short of all-out devastation? How much should we spend on nuclear, as opposed to other, forces? These are the "good old" questions with which we have grappled for decades.

In the face of new developments in the broad strategic setting, we find ourselves in receipt of the proverbial good news and bad news. We are finally adapting to the set of operational requirements with which we have been struggling since the 1960s. We finally generated the resources needed to modernize the total posture, and we are finally starting to bring our force structure planning and our employment planning more closely into line. That's the good news. The bad news is that it's not the 1960s any more, it's the 1980s. Change is required--but of what kind? Should our adjustment follow traditional patterns--i.e., to what degree should we incorporate new developments into our traditional concepts? How, or more properly, should, we modify our forces, strategies, plans, etc. at the margin? What, if any, "radical" solutions are called for?

Increasingly, we hear calls for the latter, albeit from many very different quarters. The list has recently included the following:

- Star Wars, a.k.a. "the Strategic Defense Initiative"
- The nuclear freeze movement
- No-first nuclear use proposals
- Adjustment of strategy and doctrine in the light of the "nuclear winter" proposal
- "Deep Cuts" as a means to meaningful arms control
- Nonnuclear strategic options
- "Protracted" nuclear war
- New nonnuclear theater defense concepts

Each of these would seem to suggest a very substantial overhaul in the way our nuclear planning establishment might go about its business. Compared with more gradual, cautious responses to the changing context, which, then, is the better approach? To answer this question, consider in more detail some of the forces that may well influence the strategic evolutionary process of the next two decades.

FACTORS POTENTIALLY INFLUENCING THE EVOLUTION OF STRATEGY IN THE DECADES AHEAD

In short, we currently perceive the confluence of two powerful forces that could strongly shape our strategic planning in the next decade or two. One of these derives from the historical pattern, described above, which features increasing stability. Certainly the continuation of this pattern in force would *not* mean a period of "stagnation" in the strategic posture: The posture as a whole would continue to evolve in any case generally according to the same kinds of forces that have shaped developments to the present time. Rather, if historical patterns continue to be valid, the transition phase from the early 1980s looking to the 1990s will be nowhere near as dynamic as was the view from the late 1950s and early 1960s looking toward the late 1960s.

In fact, change will proceed at a measured and fairly stable pace *unless we radically amend the way we do things*. Now, a number of proposals are currently circulating that advocate fairly dramatic shifts in the way we go about our strategic business. Many of these proposals

in fact speak to developments that are many, many years down the road, but that shouldn't obscure the fact that present decisions and actions can have major implications for the future. For example, demonstrating uncertain SDI technologies in a manner that leads to ABM treaty abandonment may matter little in the present, but this eventually may come back to haunt us if we decide later that our original assumptions about strategy or technology were incorrect.

In my view--a pessimistic one perhaps--we have a quite imperfect grasp on the key variables that combine to shape the strategic future:

- We don't have a very good feel for how we can translate abstract theories or concepts into practical results.
- We don't have a sufficiently good understanding of many key variables (notably Soviet and allied responses).
- Even if we did, both our historical experience and the nature of the probable domestic U.S. policy environment should combine to suggest that even the best laid plans stand a high probability of not going as intended.

For these and other reasons, a fairly cautious approach to transition management is probably the most prudent course. At the same time that we evaluate new possibilities, we should avoid great breaks with the past. The current strategic situation may bespeak a chaotic picture, but it is in the form it is today for good reasons, which we cannot and should not try to strike from our memories. Though there may be enormous dissatisfaction with various aspects of the current strategic context, it is incumbent upon us to try to live with it for the time being. Rather than depart radically from historical trends, it is probably safer and cheaper to move forward fairly modestly. This will come as objectionable advice to many on all sides of the current strategic debate, but the inherent stability of the strategic context up until now is too valuable a legacy to jettison casually. In short, the present situation may be tortured, confusing, and frightening, but it is stable enough that we should not abdicate from it without sufficient cause.

Let me follow up on this argument for a balanced and gradual strategic transition by demonstrating the pitfalls toward which radical solutions have in the past, and probably would also in the future, tend to lead us. The historical record discloses many lessons pertinent to the present popularity of radical options. Yet, the same deficiencies that overthrew prior proposals--or, worse, that led to problems as attempts were undertaken to implement substantial reformations in short order--would be at work today in virtually every case. This is not to suggest that the following four major problems could *not* somehow be gotten to grips with: rather, the point is that before embarking on some major new initiative, proponents should be able to articulate responsible roadmaps that protect against the following common pitfalls.

Some Common Oversights in Arguments for Radical Change

First, the various subcomponents of many strategic programming and policy problems are often considered independently of one another. Public policy issues, military and civilian alike, have an irresistible tendency to fragment into a number of highly compartmentalized sub-debates. But once a major debate decomposes into its various and sundry elements, many aspects of an ongoing project will be managed and promoted in ways that may have nothing to do with other parts of the problem. In many cases, different parts of a program drift apart in contradictory directions. When it comes time to relink the components of a new program or concept, the resulting crazy-quilt of decisions and capabilities may only by chance be a coherent and unified whole.

But this outcome, which arises so many times that it would be conspicuous should it be totally absent, often does not encourage many advocates to look beyond the alluring aspects of their corner of the debate to consider a larger picture. This failing has, of course, many historical antecedents. One of the most notable was the nuclear planning situation in the 1950s in which enormous disconnections between different nuclear commands, and between nuclear and conventional capability planners, were rife.³

³For example, different service and even branch targeting was not coordinated until the late 1950s, with the result that some targets were

Consider some more current cases in point. It may be surprising to hear that the MX ICBM is, in its own right, one of the great acquisition successes in recent memory. It is hard to imagine a more cost-effective weapon system on a per-warhead-delivered basis. The program is ahead of schedule, under budget, and exceeding its performance goals.

Unfortunately, things are not so rosy with the basing mode. The MX was conceived at a time when there seemed no overwhelming disadvantages to fixed silo basing, a planning assumption that has been undermined during the past several years, leaving us with an ideal silo-based missile rather less well-suited to alternative (e.g., mobile) deployment modes.

Similarly, proponents of so-called "Confidence Building Measures" have fallen into the same trap. If only better means of communicating and otherwise resolving crises were available, they claim, potential military disasters might be averted. But however sensible some of their proposed technologies and procedures for communicating with adversaries in inadvertent crises might be, CBM enthusiasts often neglect the far more important matter of why long-term major power competitions go bad and lead to serious military confrontations. It is all well and good to improve techniques for communicating, but if a larger view of the sources of confrontation is not factored into the equation, good communications may only illustrate the uninteresting fact of the extent to which the basic issues at stake are irresolvable without some drastic kind of action.⁴

The Strategic Defense Initiative (SDI) holds out perhaps the greatest promise of becoming an archipelago of independently approached issues. We have technologists, strategists, budget experts, political analysts, polemicists, and others each vigorously debating some side-issue or other; but few bother to cast their cases in terms of larger issues. This fission of the debate into various fragments is, admittedly, a natural consequence of the enormous uncertainty, novelty, and complexity of the issues, but the fact that few people are asking

being "overkilled" while others went unstruck. Indeed, many time on target conflicts were shown to be written into the various uncoordinated war plans.

⁴See K.N. Lewis and M.A. Lorell, "Confidence Building Measures in Historical Perspective, *Orbis*, Summer 1984.

"big" questions--e.g., if SDI works, can the enemy counter it? if they can't counter it, can we afford it? if we can afford it, is it good for our coalitions? etc.--is not necessarily a good sign.

For instance, some would-be strategic defenders eagerly anticipate the day when we can neutralize those very dangerous Soviet heavy ICBMs (now represented chiefly by the SS-18).⁵ But although this capability might be highly valuable in some scenarios (e.g., major counterforce exchanges), the mutual possession of such defenses might be highly unproductive in other scenarios. Even if Soviet missile defenses were inferior to ours, they might be adequate to frustrate U.S. attempts to execute limited nuclear options in support of a failing regional defense effort, say in NATO. Since it has been NATO, not the Soviets, who have sought to counterbalance an apparently unsatisfactory conventional defense situation with threats to use nuclear weapons on a limited basis, deployment of even modest anti-missile defenses could drastically undercut our basic theater defense strategies. In other words, concentration on only on the value of boost-phase intercept capabilities in selected major attack scenarios blinds us to the implications of SDI for other kinds of issues. *Exactly the same criticism can be leveled on any of the recent "No-First Use" proposals.*

A second deficiency in much strategic reasoning that tends to encourage ambitious thinking about strategic alternatives is the widespread disinclination toward consideration of what one might, for want of a better expression, call "management issues." It is quite hard to concentrate on the day-to-day problems of implementing war and program planning guidelines, managing force operations, and paying for the posture when there are grand issues of policy and strategy to be resolved. Although it is impossible to take on directly many components of the strategic management problem for reasons of sheer complexity, security classification, technical difficulty, and the like, many an apparently good strategic idea has nonetheless withered on the vine

⁵The advantage of a space-based Ballistic Missile Defense System in this regard is that ICBMs would be attacked during their boost-phase, prior to the time at which a missile's Post Boost Vehicle dispenses its individual warheads. Thus, "highly fractionated" missiles--i.e. launchers with many warheads--are relatively unattractive, and the Soviets would presumably channel their offensive initiatives into less menacing programs.

because conceptual appeal ends up counting for little if it is not based upon a sound foundation.

Let me again cite a couple of examples to convey a sense of how neglecting mundane matters can undermine the loftiest strategic cerebrations. One concerns the preparation of the so-called SIOP or "Single Integrated Operational Plan," which is the war plan that contains the various options we might elect to launch at our adversaries. Each option is very specific. Given a certain objective, the plan translates attack goals into tremendous operational detail: what aircraft should deliver what weapon at which target to inflict a specified level of damage, and so on. Coordinating among perhaps thousands of warheads atop thousands of launchers across intercontinental distances and in the face of determined enemy defenses is a hard task, and the more flexibility we build into plans, the harder this planning seems to get. But the task *must* be done, and to do so, it is necessary to boil the highest level national aims--e.g., "be able to deter the Soviet Union by maintaining the ability to inflict unacceptable damage on it"--down to a myriad of times, coordinates, frequencies, etc.

Thus, a few years ago, a new idea was briefly in vogue. It was suggested that the SIOP be modified to threaten those in the Soviet Union who were really the bad guys. After all, the average Soviet citizen didn't vote for, and probably didn't like, his or her leadership. So why hold them hostage to U.S. retaliatory threats? Why not threaten Soviet decision makers where it hurt by aiming U.S. attacks at them personally and at their means of controlling their unwilling subjects (e.g., the military, KGB, etc.)? At first glance this idea seems fairly intuitive, but such super-discriminating targeting is usually not technically feasible. For instance, just how does one continuously target Kremlin officials fleeing Moscow by car or plane? How does one knock down the local KGB headquarters with a nuclear weapon without doing horrible damage to local citizens who might loathe that particular instrument of repression. In short, for want of an appreciation of some basic technical realities, a new conceptual notion came to absorb much criticism.

A second example can be extracted from the recent annals of arms control: specifically, the "nuclear freeze." Again, like the counter-control targeting case, the freeze notion has a certain gut appeal. But no one has explained just what would be frozen. There are a number of reasons for defining exactly the basis of a freeze, and they are more than simple technicalities. For instance, should we prohibit the replacement of old warheads on a one-for-one basis with new warheads that may be safer as well as more effective (i.e. do we want to freeze a level of safety to prevent growth in effectiveness?). Should we freeze levels on important "non nuclear" adjuncts to offensive delivery forces, such as aerial tankers (which can refuel, and extend the range of, cargo and tactical airplanes as well as bombers) and air defense fighters (which can defend friendly airspace in Europe as well as our homeland in a nuclear exchange)? Do we freeze reconnaissance capabilities that are equally adept at verifying the freeze and finding new targets to support warfighting ambitions? We may all despise excessive legalism, but somewhere, someday, somehow, we have to apply legal methods to all treaty arrangements. If we are not specific in our Treaty language and rules, we are at best wasting our time, and we are at worst laying the foundation for subsequent differences of opinion to arise when both sides perceive that the other has violated the "spirit" of excessively vague treaties.⁶

A third failing is that many proposals for rapid change ignore the dynamic character of nearly all strategic activities. Basically, many people seem to discount the fact that in the strategic world very little of true substance happens overnight--at least in peacetime.⁷ It takes years to overhaul forces and war plans. It takes years to persuade domestic, allied, and adversary observers to concur with new policy

⁶Existing U.S.-Soviet treaties are prepared in great detail, but even so, there is still much disagreement on the fine points, which often leads to trouble. One need only survey the several recent controversies surrounding alleged Soviet violations of any number of arms control treaties to see that even the degree of specificity we've seen so far is no guarantee against "misunderstandings" down the road.

⁷Some changes, for instance modifications in operational tactics, alert rates, and the like, can be implemented in quite short order, of course.

initiatives. During these intervals, there are many opportunities for adjustments in other aspects of one's posture, in the balance, in the technological base, and so on. But such potentially significant developments tend to be washed out when we view strategic evolution as a series of Polaroid snapshots and not as a moving picture.

The history of the competition between U.S. manned bombers and Soviet air defenses is a classic case in point. For a quarter of a century, reports of the imminent demise of at least the B-52 and, perhaps, of the manned bomber concept as a whole have circulated. Yet two decades after the downing of Francis Gary Powers' U-2, the Soviets still had trouble dealing with two quite tame Korean Airliners. Even against a fully alerted Soviet air defense system, I would personally guess that our current force of B-52s--which were considered by some to be so vulnerable in the early 1960s that a new aircraft (the B-70) was essential--would perform their missions extremely well today.

Now, SAC's continuing ability to penetrate over the past 20 years has, in the absence of a new, follow-on bomber, been assured by the constant modification of the force "at the margin" to anticipate new threats as they emerged. For every highly touted--and expensive--Soviet interceptor, radar, or missile to appear for two decades or more, SAC has conceived a more inexpensive countermeasure to maintain force effectiveness. When high-altitude penetration became too risky, bombers were ordered to penetrate at low altitudes. As key radars and control centers became too menacing, plans were made to suppress them with missiles prior to bomber arrival. As terminal and barrier defenses became too dangerous, we equipped bombers with decoys, countermeasures, and standoff missiles so that defenses could be jammed, overwhelmed, or simply bypassed. No estimate has appeared in public, but the cost exchange ratios are probably in our favor. That is, for every dollar the Soviets have spent to foil SAC, we have neutralized the effort with pennies or maybe dimes. In the end, then, it will be the sheer effects of age--the physical wear and tear on aircraft and the growing costs of maintenance that begin to afflict elderly weapons systems--that signal the demise of the B-52, and not threat developments. To overlook such dynamic issues, in short, can lead one to quite a biased view of the real strategic problems before us.

A fourth and final failing is in effect a philosophical one: the inability of many radical change doctrines to tolerate a certain irresolvable dilemma that will always haunt nuclear planners. The dilemma is basically this. On the one hand, no one can ever guarantee the end of a nuclear conflict on acceptable terms. Thus, any nuclear confrontation might escalate to a point where the damage done would eclipse any national objectives that might have been at stake.

On the other hand, unless we relegate nuclear forces to a "doomsday device" role--one in which they would only deter a like Soviet threat--we must behave as though it were possible to conduct some kind of meaningful limited nuclear operations. Why? Because we would never want to unleash an all-out attack (because of the mutual results) *if some kind of alternative course were available to us.* Moreover, we can never know what the Soviets might attempt. As little as we may like to anticipate a flexible employment contingency, we must for the sake of prudence prepare for some kind of response options other than those that ensure mutual suicide. A flexible employment capability also has certain side benefits. For one, we can use some limited nuclear threats to avoid having to raise the very expensive armies, air forces, and navies needed to deal with Soviet conventional power on a one-to-one basis.

Given the unbelievable destructive power of world nuclear forces, and the enormous resources invested in these arsenals (more than a trillion dollars by the United States alone since 1945, in \$FY85), it is unsatisfying to have to acknowledge that many of our decisions must necessarily be subject to this dilemma, which cannot, in my view, ever be resolved or evaded. To some people the dilemma is downright intolerable, and through history, many different approaches, all of them chimeras so far, might have been explored in efforts to escape this awful quandary. In the 1950s, some thought that air defenses or a first strike might eliminate the Soviet retaliatory threat, allowing us to prevail in nuclear conflict; but the proliferation of Soviet forces and the advent of the ballistic missile (not to mention *their* option of going first) pulled those rugs out from under those proponents. For a while, it was also supposed that a nuclear war might be confined to a

purely "tactical nuclear" engagement. However, the residents of future nuclear battlefields objected, and moreover, even tactical nuclear victory did nothing to rule out Soviet strategic reprisals. Others have identified arms control as the way out of the dilemma, and now "Star Wars" is supposed by some to be a viable exit.

But, barring some change in the basic laws of physics or human nature, some magic solution to the dilemma should *not* be reasonably expected in the near term. We must face some awful risks and contradictions no matter what. Radical solutions with all-purpose objectives are likely to be no-purpose solutions. Therefore, the case can be made that we might pursue more modest solutions, unless satisfactory results can be assured ahead of time.

The preceding is not a decisive case against radical as opposed to incremental solutions, but it should be sufficient grounds for exercising great caution in any attempt to deviate substantially from the evolving strategic context as we have known it for going on two decades now. One might also just add that, even should some of the usual pitfalls be avoided, there are a few additional cases to be made against radical initiatives. These potential problems must also be satisfactorily hedged against before we launch major new initiatives.

Among other things, radical measures:

- tend to be inefficient and overly costly. The hasty U.S. effort to build up its ground commitment in Vietnam in the spring of 1965 is a classic case in point.
- tend to generate alliance turmoil and popular anxiety. In the early 1950s, NATO adopted a doctrine (MC-14/1) and a plan (the Lisbon plan) calling for an ambitious rearmament program to meet the Soviet conventional threat to Western Europe. However the plan was too ambitious and was doomed to failure from the start. Subsequent feelings of frustration and confusion led to the subsequent adoption of the quite opposite Massive Retaliation strategy.
- tend to inspire occasionally excessive adversary behavior. From a Soviet point of view, their implied threats of missile superiority in the late 1950s must have backfired. For a

missile gap did emerge as a result of Western fears of Soviet missile superiority--but the gap was stacked in the wrong direction from the Soviet vantage point.

- tend to promote disconnections in leaders' minds between the ideal and the real that could lead to dangerous misunderstandings in crises. U.S. feelings of security in the atomic bomb shortly after World War II were dashed when President Truman learned to his great shock and regret how little atomic firepower was actually in hand.
- come at the expense of other established priorities. Every dollar spent on some new undertaking will--barring an enormous readjustment in our defense concepts and in willingness of democratic peoples to spend money on defense--come out of the hide of some other program.

CONCLUSIONS

I have based the foregoing on the assumptions that historical patterns in the evolution of the strategic context can be discerned, and that these patterns are, if you will, there for good reasons. Barring the repudiation of these assumptions, the following conclusions can be drawn:

- Looking back from the 21st century, we will see the period of the late 1970s to mid-1980s as the dawn of a period of significant transition in the strategic scene. The major new influences that will determine the nature of that strategic environment are now nascent but represent nonetheless a process of gradual evolution.
- Radical changes from historical patterns could pose serious problems. Abrupt attempts to change long term trends in the short run not only can lead to minor effects (such as inefficiencies or breakdowns of popular consensus), but under some circumstances, such diversions can also have more catastrophic consequences.

- This is not to say that there is not some possible schema for a pattern of radical transformation. However, at least at the present time there is no candidate change of this type that is sufficiently well conceived that we can be confident that troubles can be avoided.
- In any case--and even if we have an adequate roadmap to identify potential pitfalls before us--implementing any kind of radical changes will involve difficult transition management problems. Tenacity and consistency will be essential.
- And finally, there will be limitations on the results that even the best plan and management techniques can bring about. Not all events are under our own control.

My conclusion, then, is that we must accordingly be rather patient. We should follow Euripides' warning that "a man pursuing great things might not gain the things present."

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